IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Satoshi Seo, et al.	Art Unit	: 1774
Serial No.	: 10/801,113	Examiner	: Dawn L. Garrett
Filed	: March 16, 2004	Conf. No.	: 9191
Title	: ELECTROLUMINESCENT DEVICE		

Mail Stop Amendment
Commissioner for Patents
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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Pursuant to United States Patent and Trademark Office OG Notices: 12 July 2005 - New Pre-Appeal Brief Conference Pilot Program, a request for a review of identified matters on appeal is hereby submitted with the Notice of Appeal. Review of these identified matters by a panel of examiners is requested because the rejections of record are clearly not proper and are without basis, in view of a clear legal or factual deficiency in the rejections. All rights to address additional matters on appeal in any subsequent appeal brief are hereby reserved.

Claims 1-28 are pending. Claims 5-8 have been withdrawn, leaving claims 1-4 and 9-28 under consideration with claims 1-4 being independent. Claims 1-4 and 9-24 are rejected as unpatentable over *Okada* (U.S. Patent Publication No. 2002/0055014) in view of *Xie* (U.S. Patent Publication No. 2003/0215667). Claims 25-28 are rejected as unpatentable over *Okada* in view of *Xie* and further in view of *Kawami* (U.S. Patent No. 5,929,561).

Applicant specifically asks the panel to review the issues highlighted below.

1. There is no suggestion or motivation to combine *Okada* and *Xie*.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.

The Examiner has failed to consider *Okada* and *Xie* in their entirety, including portions that would lead away from the claimed invention.

Okada discloses:

> A light emitting device comprising a pair of electrodes formed on a substrate, and organic compound layers comprising a light-emitting layer provided in between the electrodes, wherein at least one of the organic compound layers comprises a heterocyclic compound having at least two hetero atoms and a ***phosphorescent compound***."

Okada, Abstract (emphasis added).

Regarding the light-emitting layer, *Okada* states:

> While the light-emitting layer preferably contains the aforementioned ortho-metalated metal complex, it can also comprise other light-emitting materials. ***Useful light-emitting materials other than the ortho-metalated metal complex include various metal complexes, typically metal complexes or rare-earth element complexes of*** benzoxazole, benzimidazole, benzothiazole, styrylbenzene, polyphenyl, diphenylbutadiene, tetraphenylbutadiene, naphthalimide, ***coumarin***...

Okada, para. [0223] (emphasis added).

Xie discloses: "The novel anthracene derivatives of this invention have sufficiently large bandgaps for effective energy transfer with a range of commonly available ***fluorescent dyes*** as dopants. Examples of such blue dopants include arylamines, coumarins...." *Xie*, para. [0073] (emphasis added). Coumarin derivatives in accordance with the invention are illustrated in paragraphs [0081] – [0085].

In contrast to *Okada*, *Xie* does not teach or suggest metal complexes or rare-earth element complexes of coumarins. Furthermore, *Xie* states: "It is an advantage of the present invention, that the organic electroluminescent (EL) element, which belongs to anthracene, coumarine and

benazole derivatives, or their combinations, provides thermally stable, glassy, and ***highly fluorescent materials*** in condensed thin films." *Xie*, para. [0037].

Thus, *Okada* teaches that the light emitting layer includes a phosphorescent compound. *Okada* further teaches that light-emitting materials may include metal complexes or rare-earth element complexes of coumarin. In contrast, *Xie* teaches highly fluorescent materials in condensed thin films. *Xie* does not teach or suggest metal complexes or rare-earth element complexes of coumarin.

A prior art reference must be considered in its entirety, including portions that would lead away from the claimed invention. The differences between the molecular processes involved in phosphorescence and fluorescence are well known. The fact that *Okada* requires a phosphorescent compound in the light emitting layer, while *Xie* teaches advantages of fluorescent compounds, constitutes a mutual teaching away. Motivation to combine the cited art simply does not exist.

The Examiner has therefore failed to establish a *prima facie* case of obviousness.

For at least these reasons, the 35 U.S.C. § 103(a) rejections of claims 1-4 and 9-24 over *Okada* in view of *Xie* should be withdrawn.

Furthermore, *Kawami* does not remedy the failure of the combination of *Okada* and *Xie* to describe or suggest the subject matter of the independent claims. For the at least this reason, the 35 U.S.C. § 103(a) rejections of claims 25-28 over *Okada* in view of *Xie* and *Kawami* also should be withdrawn.

2. There is no reasonable expectation of success.

Because of the different molecular processes involved in fluorescence and phosphorescence, the decay time of emitted light for fluorescent and phosphorescent compounds differs by orders of magnitude. Combining the metal-free dopants of *Xie* with the light emitting layer of *Okada*—when Okada specifically teaches phosphorescent metal complexes or rare-earth element complexes of coumarin—would change the principle of operation of the *Okada* device and/or render the *Okada* device unsatisfactory for its intended purpose.

As such, the 35 U.S.C. § 103(a) rejections of claims 1-4 and 9-24 over *Okada* in view of *Xie* and the rejections of claims 25-28 over *Okada* in view of *Xie* and *Kawami* should be withdrawn.

Applicant submits that all claims are in condition for allowance.

Please apply any charges, or any credits, to our deposit account no. 06-1050.

Respectfully submitted,

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